

CLAIMS

1. A method of determining a map of a surface, said method comprising:
measuring a first part of a substrate belonging to a group of substrates; and
based on a result of said measuring, computing a map of a second part of the
substrate, the first part at least partially overlapping with the second part.

2. The method of determining a map according to claim 1, said method
further comprising determining, based on the map, at least one of a height and a tilt of
at least one of the substrate and another substrate belonging to the group.

3. The method of determining a map according to claim 2, said method
further comprising measuring at least one of a height and a tilt of the at least one of
the substrate and another substrate belonging to the group,

wherein said determining includes correcting a result of said measuring at least
one of a height and a tilt.

4. The method of determining a map according to claim 2, wherein during
said measuring, the substrate is positioned on a chuck, and

wherein during said determining, the at least one of the substrate and another
substrate is positioned on at least one of the chuck and a second chuck similar to the
chuck.

5. The method of determining a map according to claim 4, wherein during
said measuring, the substrate is clamped to the chuck by a clamping mechanism, and

wherein during said determining, the at least one of the substrate and another
substrate is clamped to at least one of the chuck and the second chuck by at least one
of the clamping mechanism and a second clamping mechanism similar to the
clamping mechanism.

6. The method of determining a map according to claim 2, wherein during said measuring, the substrate is positioned on a substrate table, and

wherein during said determining, the at least one of the substrate and another substrate is positioned on at least one of the substrate table and a second substrate table similar to the substrate table.

7. The method of determining a map according to claim 2, said method further comprising:

projecting a patterned beam of radiation onto a target portion of the at least one of the substrate and another substrate belonging to the group.

8. The method of determining a map according to claim 7, wherein said determining includes extrapolating the at least one of a height and a tilt based on the map.

9. The method of determining a map according to claim 7, said method further comprising using a sensor to measure at least one of a height and a tilt of the at least one of the substrate and another substrate belonging to the group.

10. The method of determining a map according to claim 9, wherein the sensor is a multi-spot sensor.

11. The method of determining a map according to claim 1, said method further comprising storing the result of said measuring.

12. The method of determining a map according to claim 1, wherein the second part includes a strip along an edge of the substrate.

13. The method of determining a map according to claim 1, wherein said measuring includes measuring along a line perpendicular to an edge of the substrate.

14. The method of determining a map according to claim 1, wherein said measuring includes measuring along a line that is at least one among perpendicular to and parallel to a scan direction during exposure of the substrate.

15. The method of determining a map according to claim 1, wherein the first part includes a strip along an edge of the substrate.

16. The method of determining a map according to claim 1, wherein said measuring includes using a single spot level sensor.

17. The method of determining a map according to claim 1, wherein the map is an average height map.

18. The method of determining a map according to claim 1, wherein the map is an average profile map.

19. An apparatus comprising:

a sensor configured to measure a first part of a substrate belonging to a group of substrates; and

a processing unit configured to compute, based on a result of said measuring, a map of a second part of the substrate, the first part at least partially overlapping with the second part.

20. The apparatus according to claim 19, said apparatus further comprising a memory unit configured to store the map.

21. The apparatus according to claim 19, wherein the processing unit is configured to determine, based on the map, at least one of a height and a tilt for at

least one of the substrate and another substrate belonging to the group.

22. The apparatus according to claim 21, said apparatus further comprising a projection system configured to project a patterned beam of radiation onto a target portion of the at least one of the substrate and another substrate belonging to the group.

23. A data storage medium storing instructions executable by an array of logic elements, the instructions describing a method of determining a map of a surface, said method comprising:

measuring a first part of a substrate belonging to a group of substrates; and
based on a result of said measuring, computing a map of a second part of the substrate, the first part at least partially overlapping with the second part.

24. The data storage medium according to claim 23, said method further comprising determining, based on the map, at least one of a height and a tilt of at least one of the substrate and another substrate belonging to the group.

25. The data storage medium according to claim 24, said method further comprising measuring at least one of a height and a tilt of the at least one of the substrate and another substrate belonging to the group,

wherein said determining includes correcting a result of said measuring at least one of a height and a tilt.

26. The data storage medium according to claim 23, wherein at least one of the first part and the second part includes a strip along an edge of the substrate.

27. The data storage medium according to claim 23, said method further comprising measuring at least one of a height and a tilt of the at least one of the

substrate and another substrate belonging to the group.

28. A method of determining a map of a surface, said method comprising:
measuring a first part of a substrate belonging to a group of substrates;
storing a result of said measuring; and
based on the result of said measuring, computing a map of at least one of a
second part of the substrate, the first part at least partially overlapping with the second
part, and a part of another substrate belonging to the group.

29. The method of determining a map according to claim 28, wherein said
computing a map is performed during determining at least one of a height and a tilt of
at least one of the substrate and another substrate belonging to the group.

30. An apparatus comprising:
a sensor configured to measure a first part of a substrate belonging to a group
of substrates;
a memory unit configured to store a result of said measuring; and
a processing unit configured to compute, based on the result of said measuring,
a map of at least one of a second part of the substrate, the first part at least partially
overlapping with the second part, and a part of another substrate belonging to the
group.

31. The apparatus according to claim 30, wherein said processing unit is
configured to determine at least one of a height and a tilt of at least one of the
substrate and another substrate belonging to the group, and
wherein said processing unit is configured to compute the map during said
determining.

32. A method of determining a map of a surface, said method comprising:
measuring a profile of at least a part of a structure arranged to support a
substrate;

computing a map of a substrate supported by the structure; and
storing the map.

33. The method of determining a map of a surface according to claim 32, wherein measuring a profile includes measuring a height profile.

34. The method of determining a map of a surface according to claim 32, said method further comprising, subsequent to said storing the map, determining at least one of a height and a tilt of a substrate supported by the structure based on the map.

35. A method of determining a map of a surface, said method comprising:
measuring a first part of a substrate supported by a structure;
computing a map of at least a part of the structure, based on a result of said measuring; and
storing the map.

36. The method of determining a map of a surface according to claim 35, wherein the map includes an average profile map.

37. The method of determining a map of a surface according to claim 35, said method further comprising determining at least one of a height and a tilt of another substrate based on the map.

38. A method of determining a map of a surface, said method comprising:
measuring a first part of a substrate supported by a structure;
storing a result of said measuring; and
computing a map of at least a part of the structure.

39. The method of determining a map of a surface according to claim 38, wherein said computing a map is performed during determining at least one of a height and a tilt of another substrate.

40. The method of determining a map of a surface according to claim 38, wherein the map includes an average profile map.